Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Method for driving a gas discharge lamp (1), ~~specifically a HID lamp, more specifically a metal halide lamp, most specifically a metal halide lamp with an aspect ratio larger than 3 or even 4,~~ wherein the lamp is supplied with a commutating DC current having a duty cycle (D) and an average current intensity (I_{AV}) at a certain electrical output ~~power;~~ power, the method comprising: ~~the step of~~

setting the duty cycle (D) from a range of duty cycles in response to an input signal, wherein the lamp is controlled to operate at the duty cycle as set; and

varying (i) the average current intensity (I_{AV}) as a function of the set duty cycle and (ii) the electrical output power as a function of the set duty cycle and a predefined relationship between duty cycle and power setting stored in a memory for a given color temperature range in order to vary the color temperature of the lamp.

2. (Currently Amended) Method according to claim 1, wherein, ~~when~~ responsive to a change in the average current intensity (I_{AV}) ~~is changed such as~~ to effectively result in an increase in the color temperature of the lamp, the electrical output power is increased.

3. (Previously Presented) Method according to claim 1, wherein the average current intensity (I_{AV}) and the electrical output power are varied within a current range and a power range, respectively, having upper and lower current limits and upper and lower power limits, respectively, such that the color temperature of the lamp is varied within a temperature range having an upper temperature limit and a lower temperature limit; wherein the electrical output power is set at the upper power limit when the color temperature of the lamp is at the upper temperature limit, and wherein the electrical

output power is set at the lower power limit when the color temperature of the lamp is at the lower temperature limit.

4. (Previously Presented) Method according to claim 3, wherein, at least within a part of said temperature range, the electrical output power is varied proportional to variations in the average current intensity (I_{AV}).

5. (Previously Presented) Method according to claim 1, wherein the average current intensity (I_{AV}) and the electrical output power are varied such as to keep the color rendering index (CRI) at a substantially constant value.

6. (Previously Presented) Method according to claim 1, wherein the average current intensity (I_{AV}) and the electrical output power are varied such as to keep the light output (lumen) at a substantially constant value.

7. (Previously Presented) Method according to claim 1, wherein the average current intensity (I_{AV}) is changed by changing the duty cycle (D).

8. (Previously Presented) Method according to claim 7, wherein, in each setting of the duty cycle (D), a positive current magnitude (I1) is equal to a negative current magnitude (I2).

9. (Previously Presented) Method according to claim 8, wherein, when the average current intensity (I_{AV}) is varied, the absolute value of the current magnitude is maintained at a fixed value, irrespective of the actual value of the average current intensity (I_{AV}).

10. (Currently Amended) Method according to claim 1, ~~practiced on~~ wherein the gas

discharge lamp comprises a high-pressure lamp ~~(above~~ having a pressure above 10 ~~atm)~~ atm and arranged in a vertical orientation, wherein the color temperature is varied over a temperature range having a lower temperature limit in the order of 2800 K or lower and having an upper temperature limit in the order of 4000 K or higher.

11. (Currently Amended) Driving apparatus (60) for driving a gas discharge lamp (1), ~~specifically a HID lamp, more specifically a metal halide lamp, most specifically a metal halide lamp with an aspect ratio larger than 3 or even 4,~~ the apparatus comprising:

current generating means (61, 62, 63, 64) for generating a current with a substantially constant current intensity;

commutating means (65) for receiving said current, and having an output for connecting to a lamp (1), the commutating means (65) being arranged for commutating said current having a duty cycle (D) and an average current intensity (I_{AV}); and

~~the driving apparatus being designed to execute a method according to any of the previous claims~~ control means coupled to the current generating means and the commutating means, the control means being responsive to an input control signal (S) for setting the duty cycle from a range of duty cycles and controlling the commutating means at the duty cycle as set, the control means further for controlling the current generating means and the commutating means for varying (i) the average current intensity (I_{AV}) as a function of the set duty cycle and (ii) the electrical output power as a function of the set duty cycle and a predefined relationship between duty cycle and power setting for a given color temperature range in order to vary the color temperature of the lamp.

12. (Currently Amended) Driving apparatus according to claim 11, wherein the ~~driver (60) is provided with~~ control means comprises a control circuit (92) having a control input (93) for receiving [[a]] the control signal (S) and having a control output (94; 95) for controlling the driver (60), and wherein the control circuit (92) is responsive to [[a]] the

control signal (S) received at its control input (93) to control the driver (60) such as to set an average current intensity (I_{AV}) in accordance with the control signal (S).

13. (Currently Amended) Driving apparatus according to claim 12, further comprising a memory (96) containing [[a]] the predefined relationship, wherein the predefined relationship is further between average current intensity (I_{AV}) and electrical output power; wherein the control circuit (92) is designed to control a down-converter (64) in order to set the electrical output power on the basis of the predefined relationship stored in said memory.

14. (Previously Presented) Driving apparatus according to claim 12, wherein the control circuit (92) is designed to control the commutating means (65) such as to set a certain value of the duty cycle (D) in order to set a certain value of the average current intensity (I_{AV}).

15. (Currently Amended) Driving apparatus according to claim 14, further comprising a memory (96) containing [[a]] the predefined relationship between duty cycle and electrical output power; wherein the control circuit (92) is designed to control a down-converter (64) in order to set the electrical output power on the basis of the predefined relationship stored in said memory.

16. (Previously Presented) Driving apparatus according to claim 12, wherein the control circuit (92) is designed to control a down-converter (64) in order to set the output current magnitude at a fixed value independent from the average current intensity (I_{AV}).

17. (Previously Presented) Driving apparatus according to claim 16, wherein the control circuit (92) comprises a current magnitude selection input (98), and is responsive to a command input received at this second input (98) to set said fixed value.

18. (Previously Presented) Driving apparatus according to claim 12, adapted for variable current-controlled particle distribution shift, wherein the driving apparatus (60) is provided with a control setting device (91) coupled to said control input (93) of said control circuit (92);

wherein the control setting device (91) is arranged for generating a control signal (S) which is continuously variable within a predetermined range;

and wherein the control circuit (92) is arranged to continuously vary the average current intensity (I_{AV}) and output power of the commutating lamp current in response to said control signal (S).

19. (Currently Amended) Variable color temperature light generating system (90), comprising:

a gas discharge lamp (1)~~, specifically a HID lamp, more specifically a metal halide lamp, most specifically a metal halide lamp with an aspect ratio larger than 3 or even 4, preferably a high-pressure lamp having a lamp pressure over 10 atm~~; and

a driving apparatus (60) ~~according to any of claims 11-18, the driving apparatus being capable of~~ coupled to and configured for driving the lamp with a variably settable average current intensity (I_{AV}) and correspondingly variably settable output power in order to induce a variable current-controlled particle distribution shift in the lamp, such as to allow a color point to travel a color line in the chromaticity diagram, the driving apparatus including:

current generating means (61, 62, 63, 64) for generating a current with a substantially constant current intensity;

commutating means (65) for receiving said current, and having an output for connecting to a lamp (1), the commutating means (65) being arranged for commutating said current having a duty cycle (D) and an average current intensity (I_{AV}); and

control means coupled to the current generating means and the commutating means, the control means being responsive to an input control signal (S) for setting the duty cycle from a range of duty cycles and controlling the commutating means at the duty cycle as set, the control means further for controlling the current generating means and the commutating means for varying (i) the average current intensity (I_{AV}) as a function of the set duty cycle and (ii) the electrical output power as a function of the set duty cycle and a predefined relationship between duty cycle and power setting for a given color temperature range in order to vary the color temperature of the lamp.

20. (New) Method according to claim 1, wherein the gas discharge lamp (1) comprises one selected from the group consisting of a HID lamp and a metal halide lamp, wherein the metal halide lamp has an aspect ratio larger than 3.